

SPORT FISHING IN ALBERTA 1995

**Summary Report from the Fifth
Survey of Recreational Fishing in Canada**

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PREFACE

The 1995 Survey of Recreational Fishing in Canada was the fifth in a series of nationally coordinated studies conducted by Canada's federal, provincial and territorial fisheries agencies. The questionnaires (resident and non-resident) were developed based on the national survey design to maintain the ability to compile a national roll-up of results. Survey uniformity among representatives of Canada's federal, provincial and territorial fisheries agencies, was coordinated by Kieth Brickley of the Surveys Unit, Economic Analysis and Statistics Division of Canada Fisheries and Oceans, Ottawa. Alberta Environment, Fisheries and Wildlife Management Division conducted the survey in the late winter of 1996 to obtain results based on the 1995 sportfishing season. Lewis Sonsini of the Surveys Unit, Economic Analysis and Statistics Division of Canada Fisheries and Oceans, Ottawa conducted data analyses. The Canada-wide roll-up of survey results are presented in "*1995 Survey of Recreational Fishing in Canada*".¹ The following document summarizes Alberta information, which became available in computer printout format in September 1997.

¹ - Economic and Policy Analysis Directorate, 1997
1995 Survey of Recreational Fishing in Canada
Economic and Commercial Analysis Report No. 154: 127 p.

1.0 INTRODUCTION

Details about sportfishing in Alberta in 1995 were obtained to evaluate the importance of this fishery to the public, to anglers and to the sportfishing industry. The 1995 Survey of Recreational Fishing in Canada was conducted by Alberta Environment, Fisheries and Wildlife Management Division, under the coordination of the Surveys Unit, Economic Analysis and Statistics Division of Canada Fisheries and Oceans, Ottawa. The 1995 survey was the fifth in a series of nationally coordinated studies conducted by Canada's federal, provincial and territorial fisheries agencies. The surveys have been carried out at five-year intervals since 1975 to develop an understanding of, and trends in, Canada's sportfishery. This report provides information on angler demographics, fishing pressure, fish harvest and the economic benefits of the Alberta sportfishery in 1995.

Survey questionnaires (resident and non-resident) were developed based on the national survey design to maintain the ability to compile a national roll-up of results. However, Alberta questionnaires also included questions specific to Alberta's sportfishing industry. The survey posed questions about the angler's experience, opinions and fishing activity including location, frequency and time spent fishing. Also, the angling frequency and preferences for seventeen species of fish were examined. Anglers were asked about their satisfaction with their fishing experience and factors that influence their choice of fishing sites. Expenditure information was obtained to provide an idea of the amount anglers are spending to obtain their fishing experience and in what expenditure areas.

The survey was administered by mail to a systematic random sample² of residents and non-residents who purchased a sportfishing licence in 1995. Total mailing samples of 4578 Albertans, 456 other Canadians and 490 non-Canadians were obtained. The mail-out package, which included a map of Alberta showing eight Fish Management Areas (Figure 1), was sent out to selected anglers. A 30% response to the first mail-out was slightly lower than expected in comparison to the high initial return of 50-55% experienced with previous national surveys. A second mail-out was conducted to all non-respondents after a three-week period, which increased the assurance that responses from both avid and non-avid anglers were included in the results. An additional response of 16% was received from the second mail-out.

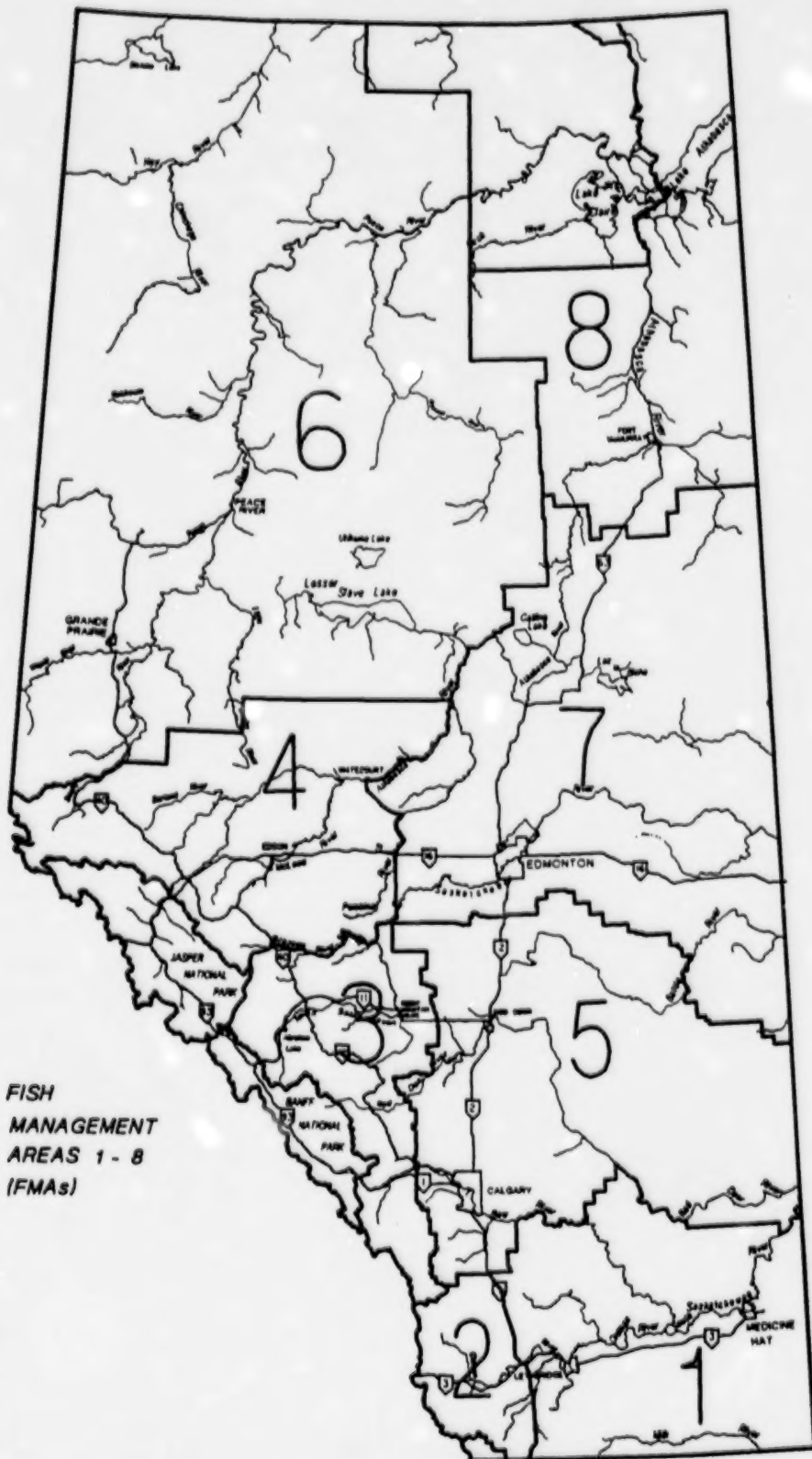
Data analyses were conducted by the Surveys Unit, Economic Analysis and Statistics Division of Canada Fisheries and Oceans, Ottawa (processed using SPSS/PC, Version 6.0, and output on an HP3000-917LX, using SPSS 3.0). Statistical reliability of the major data parameters was considered "useable without condition" (coefficient of variation less than 16.5%, Statistics Canada's guidelines). The coefficients of variation reported for the Alberta resident questionnaire were less than 7.8% (Economic and Policy Analysis Directorate 1997).

Forty-six percent (2320) of the questionnaires sent to holders of Alberta sportfishing licenses in 1995 were completed and returned to provide the basis for the information given in this report. After extrapolating data from these returns, gathering information on known licence numbers and comparing estimates, this overall description of sportfishing in Alberta in 1995 was developed.

2.0 RESOURCE BASE

Alberta has a wide range of aquatic habitats, including small streams in the mountains and foothills, large rivers extending through the prairie, parkland and boreal regions; alpine lakes, prairie potholes and reservoirs, and large lakes of the northern boreal forest. These aquatic systems contain a diverse fish fauna made up of 60 species, of which 51 are native and 9 have been introduced. Eighteen species are important in recreational, commercial or domestic fisheries. The remaining 42 species, the majority of which are small in size, are indices of bio-diversity and play an important role in the food chain for predatory fish and fish-eating birds and mammals.

² - A systematic random sample selects a portion of the total population that is being surveyed. The random nature of the sample means that any individual in the population is as likely to be included as any other, therefore, the sample is assumed to be representative of the population as a whole.



FISH
MANAGEMENT
AREAS 1 - 8
(FMAs)

Mountain and foothill regions contain seven species of trout, and mountain whitefish, shifting to Arctic grayling in northern portions. Brook trout, brown trout and golden trout, although introduced species, have established self-reproducing populations and have become integral components of the game fish fauna of Alberta. The Bow and Crowsnest rivers are renowned for rainbow and brown trout fishing. Lake trout are available in a few of the deeper lakes, mainly in northern Alberta, and provide unique fishing opportunities. Yellow perch, northern pike, walleye and lake whitefish dominate the fisheries in lakes throughout the prairie, parkland and boreal areas. The distributions of native species such as rainbow trout, cutthroat trout, walleye, yellow perch, northern pike and lake whitefish have been expanded through stocking and transfers, and the subsequent development of self-reproducing populations in new areas.

The fish resources of Alberta are limited in abundance by the small amount of suitable habitat. Alberta does not have a large amount of surface water, having only 2.5 percent of its area as freshwater. Surveys of lakes throughout the province have shown that only about 800 lakes in Alberta have natural game fish producing capabilities. The other lakes are too shallow and are either too warm for fish in the summer or freeze to the bottom during winter, although 200 to 250 are stocked annually with trout.

Approximately 3/4 of the lake area in Alberta is located north of a line through Lac La Biche and Valleyview, whereas about 3/4 of the human population lives in the area south of that line. Very high demand is placed on the fish resources in the settled part of the province. Alberta has a ratio of nearly 400 anglers per lake. Fish populations in Alberta have declined as a result of overharvest and habitat alteration.

Each year the Fisheries and Wildlife Management Division stocks millions of fish into water bodies in Alberta to improve angling opportunities. In 1995, 4.7 million trout were stocked throughout the province to provide trout fisheries where few other opportunities exist. As part of the program to recovery walleye populations and establish new populations in suitable lakes, 28.7 million walleye fry and fingerlings were stocked in 1995.

3.0 ANGLER PROFILE

3.1 Numbers

In 1995, 246 113 anglers held Alberta Sportfishing Licenses (Table 1). About 94% of the licensed resident anglers and 96% of the licensed non-resident anglers actively fished. As well, 100 339 children under the age of 16 living in households of licensed anglers also fished. The total estimated population of active anglers in Alberta in 1995 (excluding Alberta seniors) was 332 804. The impact on Alberta's sportfishery of anglers who do not require a licence and are not covered by this survey (over 65 years of age and under 16 years of age), is probably considerable. An estimated 40 000 to 60 000 seniors fish annually in Alberta.

3.2 Origins

The majority of Alberta resident anglers reside in Fish Management Areas 5 and 7 (Table 2). The cities of Calgary (FMA 5) and Edmonton (FMA 7) account for 19.7% and 18.6%, respectively, of all resident anglers. Residents of Alberta made up 95% (232 967) of the total licensed anglers. About 50% of the 13 146 non-resident anglers in 1995 were Canadians, mainly from British Columbia and Saskatchewan (Table 3). The majority of the non-Canadian anglers were United States citizens.

3.3 Trip Information

Non-resident anglers made 154 199 trips to Alberta in 1995, of which 24% were for fishing (Table 4) and stayed in the province a total of 390 492 days, of which 85 625 (22%) were spent fishing. Non-resident Canadian anglers spent 57 174 days fishing in Alberta and non-Canadian anglers spent 28 451 days. Approximately 75 394 resident Alberta anglers (32% of all licensed resident anglers) also fished outside of Alberta in 1995.

TABLE 1. NUMBERS AND CHARACTERISTICS OF ANGLERS IN 1995.

Angling Population	Resident	Non-Resident		Total
		Canadian	Other	
Licensed Anglers ¹	232 967	6633	6513	246 113
Active Anglers ²				
Male	173 771	5749	5765	185 285
Female	46 036	570	574	47 180
Total	219 807	6319	6339	232 465
Anglers under 16 years of age ³	98 871	1092	376	100 339
Total Active Anglers ⁴	318 678	7411	6715	332 804

¹- Total licenses issued to Albertans 16 to 64 years of age, and other Canadians and non-Canadians over 16 years of age.

²- Number of licensed anglers whom indicated they actually fished in 1995.

³- Conservative estimate because only those youths that were members of a surveyed parent were included (under 16 do not require a license).

⁴- Alberta seniors (over age 64) are not include because they do not require a licence and are not surveyed.

TABLE 2. ORIGINS OF RESIDENT ANGLERS IN ALBERTA, 1995.

Fish Management Area* (FMA)	Number	Percentage
FMA 1	21 983	9.4
FMA 2	3 308	1.4
FMA 3	3 664	1.6
FMA 4	9 260	4.0
FMA 5		
Calgary	45 901	19.7
Other	<u>32 823</u>	<u>14.1</u>
Combined	78 724	33.8
FMA 6	18 626	8.0
FMA 7		
Edmonton	43 409	18.6
Other	<u>49 210</u>	<u>21.1</u>
Combined	92 619	39.7
FMA 8	4 783	2.1
TOTAL	232 967	100.0

*- Fish Management Area Boundaries in place in 1995 are shown in Figure 1.

TABLE 3. ORIGINS OF NON-RESIDENT ANGLERS WHO FISHED IN ALBERTA, 1995

Canadian	Number	Non-Canadian	Number
Territories	84	United States	
Quebec	139	Alaska	27
Maritimes	142	New England	93
Manitoba	340	East South Central	146
Ontario	887	West North Central	319
Saskatchewan	2072	Mid-Atlantic	332
British Columbia	2969	South Atlantic	492
		East North Central	518
		West South Central	691
		Pacific	1475
		Mountain	1542
		USA-Total	5635
		Other Countries	878
Canadian Total	6633	Non-Canadian Total	6513

TABLE 4. TRIP CHARACTERISTIC OF NON-RESIDENT ANGLERS IN ALBERTA, 1995.

Trip Characteristic	Canadian	Non-Resident		Total
		Non-Canadian		
Trips to Alberta for all reasons	143 989	10 210		154 199
Fishing trips to Alberta	30 163	7 207		37 370
Proportion (%)	20.9	70.6		24.2
Days spent for all reasons	300 265	90 227		390 492
Days spent fishing	57 174	28 451		85 625
Proportion (%)	19.0	31.5		21.9
Day trips for fishing	17 183	422		17 605
Nights stayed for fishing	100 077	70 029		170 106

3.4 Age and Gender

Although licensed anglers (resident seniors not included) ranged in age from 16 to 75 years of age, 75 % were 25–54 years of age (Table 5). Seventy-nine percent of the resident anglers and 91% of the non-resident anglers were male.

TABLE 5. AGE DISTRIBUTION (%) BY ORIGIN AND GENDER OF LICENSED ANGLERS IN ALBERTA IN 1995.

Age Range	Resident		Canadian		Non-Canadian		Combined		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
16 to 19	3.1	3.2	1.5	0.0	2.3	0.0	3.1	3.2	3.1
20 to 24	5.7	7.7	4.3	23.7	1.7	0.0	5.6	7.8	6.0
25 to 34	23.5	25.6	15.9	23.5	8.6	35.6	22.8	25.7	23.4
35 to 44	34.0	26.3	25.4	7.8	25.2	16.6	33.5	26.0	31.9
45 to 54	19.2	21.8	18.4	29.3	24.5	8.6	19.3	21.8	19.8
55 to 64	12.8	12.6	16.9	15.6	20.2	12.4	13.1	12.6	13.0
65 and over	0.6	0.2	13.8	0.0	16.3	26.9	1.5	0.5	1.3
unknown	1.1	2.6	3.8	0.0	1.2	0.0	1.2	2.4	1.4
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of Anglers	183241	49726	6063	570	5769	558	195072	50854	245927

3.5 Fishing Experience

On average, resident anglers had 19.6 years of fishing experience in Alberta, non-resident Canadian anglers 9.3 years and non-Canadian anglers 2.6 years. Of the resident anglers licensed in 1995 (232 967), 80% had fished in Alberta prior to 1990; however, only 57% to 72% fished during the years 1990, 1991, 1992, 1993 and 1994 (Table 6).

TABLE 6. RECREATIONAL FISHING EXPERIENCE OF LICENSED RESIDENT ANGLERS IN ALBERTA.

Number and Percentage of Resident Anglers Licensed in 1995 who had fished in Alberta in one or more previous years							
1995	1994	1993	1992	1991	1990	Prior to 1990	Total Licenses
219 807 94.4%	167 590 71.9%	154 407 66.3%	144 805 62.2%	140 473 60.3%	133 273 57.2%	186 387 80.0%	232 967

4.1 Fishing Skill

When asked to rate their own level of fishing skill, 2.4% considered themselves as experts, 31.9% as experienced, 51.1% as average, and 14.6% as beginners (Table 7).

Table 7. FISHING SKILL LEVELS OF ANGLERS IN ALBERTA IN 1995.

Level of Fishing Skill	Resident %	Canadian %	Non-Canadian %	Combined %
An Expert	2.2	5.4	7.6	2.4
Experienced	31.3	39.1	46.4	31.9
Average	51.6	49.3	35.5	51.1
A Beginner	14.9	6.2	10.5	14.6

4.2 Sportfishing Group Affiliation

Sportfishing organizations actively participate in fisheries management and regulation reviews, and in education and information programs. Only 6.1% of resident anglers indicated they belonged to a sportfishing club in 1995. Of all active anglers in 1995, including members and non-members of clubs, 28.7% felt that sportfishing organizations represented the concerns and views of the average angler, 17.5% felt they did not and 53.8% gave no opinion.

4.3 Motivations

Anglers rated relaxation, enjoyment of nature and getting away as very important motives for fishing (Table 8). Family togetherness, challenge and excitement, and companionship were rated as important motivations. Catching fish to eat, improving fishing skills and obtaining a sense of achievement were rated moderately important. Less importance was given to catching trophy fish.

Anglers rated the lack of pollutants in fish and water quality as the two most important factors when choosing a fishing destination (Table 9). The following were also considered as important to very important factors: the lack of angler crowding, the natural beauty of the area, the presence of a favourite fish species, the size of fish caught, the presence of wildlife, the cost to go fishing, the travel time or distance, the places to fish from shore, the absence of other recreationalists, the variety of species available, and information about the area. Other factors, such as boat launching facilities, the catch rate for all fish, the availability of parking, the change to catch a trophy fish, the catch rate of fish that could be kept, the availability tourist facilities and other recreational facilities were rated moderately important. Less importance was placed on the nearness to food and lodging, and the nearness to bait and tackle shops.

Non-resident anglers were asked what they would have done had no fishing opportunities been available in Alberta in 1995. Options provided were, stay a shorter time, substitute other activities, or not come at all. Most non-resident anglers (66%) indicated they would have substituted other activities, 15% said they would have stayed a shorter time, 19% would not have come at all.

4.4 Fishing Satisfaction

Anglers were asked to rate the quality of their recreational fishing experience, as well as to state their level of satisfaction with the quality of their recreational fishing experience, in Alberta. Recreational fishing was rated as good to excellent by 63.4% of the resident anglers (good: 35.9%, very good: 19.6% and excellent: 7.9%); 24.3% rated fishing as fair, and 12.4% rated the quality as poor (Table 10). The majority of resident anglers (68.6%) were satisfied with the quality of their recreational fishing experience (Table 11).

TABLE 8. RELATIVE IMPORTANCE OF FACTORS ASSOCIATED WITH THE MOTIVES FOR FISHING IN ALBERTA IN 1995*.

Factor	Resident	Non-Resident	
		Canadian	Non-Canadian
Relaxation	4.4	4.3	4.4
Enjoy Nature	4.3	4.3	4.4
Get Away	4.2	4.0	3.9
Family Togetherness	3.7	3.3	3.1
Challenge and Excitement	3.6	3.7	3.9
Companionship	3.4	3.4	3.2
Catch Fish to Eat	2.9	2.6	2.2
Improve Fishing Skills	2.7	2.7	2.7
Sense of Achievement	2.3	2.3	2.6
Catch a Trophy Fish	1.9	1.9	2.4

*- Factor ratings are 0, not important to 5, extremely important.

TABLE 9. RELATIVE IMPORTANCE OF FACTORS ASSOCIATED WITH THE CHOICE OF A FISHING DESTINATION IN ALBERTA IN 1995*.

Factor	Resident	Non-Resident	
		Canadian	Non-Canadian
Lack of Pollutants in Fish	4.5	3.9	3.9
Water Quality	4.4	4.0	4.2
Lack of Angler Crowding	3.8	3.8	4.1
Natural Beauty of Area	3.8	3.6	4.0
Presence of Favourite Species	3.6	3.3	3.4
Size of Fish	3.5	3.1	3.5
Presence of Wildlife	3.3	3.0	3.3
Cost to go Fishing	3.3	3.0	2.9
Distance/Travel time	3.2	2.8	2.5
Places to Fish from Shore	3.2	3.1	2.7
Absence of other Recreationalists	3.1	3.2	3.4
Variety of Species Available	3.1	2.6	3.0
Information About the Area	3.0	2.9	3.2
Boat Launching/Marina	2.8	2.4	2.2
Catch Rate for all Fish	2.7	2.8	3.0
Parking Availability	2.6	2.5	2.5
Chance to Catch a Trophy Fish	2.5	2.4	2.9
Catch Rate of Fish you can keep	2.4	2.1	2.0
Tourist Facility Quality	2.1	2.1	2.2
Other Recreational Facilities	2.1	1.9	1.8
Nearness to Food/Lodging	1.8	2.0	2.1
Nearness to Bait/Tackle Shops	1.8	1.8	2.0

*- Factor ratings are 0, not important to 5, extremely important.

TABLE 10. RATING OF RECREATIONAL FISHING EXPERIENCES IN ALBERTA IN 1995.

Rating Level	Resident	Non-Resident	
		Canadian	Non-Canadian
Excellent	7.9	19.7	26.1
Very Good	19.6	21.0	25.1
Good	35.9	30.2	26.1
Fair	24.3	15.8	14.4
Poor	12.4	13.3	8.3

TABLE 11. SATISFACTION LEVELS WITH RECREATIONAL FISHING EXPERIENCES IN ALBERTA IN 1995.

Satisfaction Level	Resident	Non-Resident	
		Canadian	Non-Canadian
Satisfied	68.6	77.1	81.1
Not Satisfied	20.2	11.4	11.4
No Opinion	11.1	11.6	7.5

4.5 Trout Stocking Program

Albertans spent 847 707 days fishing at trout stocked lakes, ponds and reservoirs, which was 23.4% of the total days fished by licensed resident anglers in 1995. Non-residents spent 21 874 days fishing at trout stocked sites, bring the total fishing effort to 869 581 days at trout stocked lakes, ponds and reservoirs in 1995.

Alberta's trout stocking program was rated as important to very important by 80.5% of the licensed resident anglers (Table 12); however, only 48% of the anglers indicated that they had fished at a trout stocked lake, pond or reservoir in 1995. When asked to rate their fishing success at trout stocked sites in 1995, 53.2% rated their success as good to excellent and 46.8% said poor to fair (Table 13). Rainbow trout was selection by anglers 72.8% of the time as their most preferred species for stocking (Table 14).

TABLE 12. IMPORTANCE OF ALBERTA'S TROUT STOCKING PROGRAM TO LICENSED RESIDENT ANGLERS IN 1995.

Importance Rating	%
Very Important	43.6
Important	36.8
Not Important	8.7
No Opinion	10.8

TABLE 13. FISHING SUCCESS RATES AT TROUT STOCKING SITES IN 1995.

Fishing Success Rating	%
Excellent	7.0
Very Good	17.2
Good	29.0
Fair	22.7
Poor	24.1

TABLE 14. ANGLER PREFERENCE RATING FOR STOCKED TROUT SPECIES.

Trout Species	1 (%)	2 (%)	3 (%)	4 (%)
Brook Trout	12.1	37.9	29.6	20.3
Brown Trout	8.6	24.0	35.4	31.9
Cutthroat Trout	9.4	21.3	27.4	41.7
Rainbow Trout	72.8	16.3	5.9	5.0

Rating Scale: 1 - most preferred, 2 - next preferred, 3 - next preferred, 4 - least preferred.

Anglers, during the year, often fished at trout stocked locations in more than one Fish Management Area. When anglers were asked what management areas they had fished for stocked trout, the distribution of anglers was somewhat similar to the distribution of the trout stocking effort throughout the province and to the distribution of harvest of rainbow trout (Table 15). In 1995, a total of 4.8 million trout were stocked, of which 4.3 million were rainbow trout and the remainder consisted of brook trout and brown trout.

TABLE 15. FISH MANAGEMENT AREAS FISHED FOR STOCKED TROUT IN 1995.

Fish Management Area	Percentage of Total Anglers who Fished for Stocked Trout	Percentage of Total Provincial Trout Stocking Sites	Percentage of Total Provincial Numbers of Trout Stocked	Percentage of Total Provincial Harvest of Rainbow Trout
1	10.0	10.2	19.2	13.1
2	10.3	6.4	17.4	17.0
3	19.8	12.8	14.4	13.8
4	15.0	16.2	16.1	21.0
5	19.9	21.1	12.2	14.5
6	7.6	12.1	6.2	6.4
7	15.2	20.0	12.3	11.7
8	2.1	1.1	2.3	2.9
Total angler responses	123 166			
Total sites stocked	-----	265		
Total number trout stocked		-----	4.8 million	
Total harvest of rainbow trout			-----	757 628

4.6 Derbies and Tournaments

Licensed Alberta resident anglers were asked questions pertaining to competitive fishing events, referring to events where prizes are given for catching fish from public waters. Derbies were described as being informal, small in size and offering small prizes. Tournaments were described as being well structured, large in size and offering moderate to large prizes.

4.6.1 Derbies

Approximately 8.2% of all active resident anglers said they had participated in a derby in Alberta during 1995, which represented 17 775 anglers (Table 16). The 35-44 age group made up 38.4% of the anglers who participated at derbies, but only 9.4% of all Alberta anglers in that age range were involved in a derby. The majority of Alberta anglers supported derbies, in that only 15.6% said derbies should not be allowed; however, 93.9% felt derbies should be regulated (Table 17). A mandatory permit system administered by Alberta Environment was favoured by 38.9% of the respondents, followed by self-regulation, which was favoured by 24.2%. Over 50% of the anglers responded positively in each category to allow sportfishing clubs, charitable organizations, local communities and social groups to hold derbies (Table 18). More than 70% were opposed to the categories to allow just anyone, or to allow commercial promoters to hold derbies.

TABLE 16. PARTICIPATION OF LICENSED RESIDENT ANGLERS IN DERBIES AND TOURNAMENTS IN ALBERTA IN 1995 (219 807 active anglers).

Age Ranges of Anglers	Derbies			Tournaments		
	Number of Anglers Participating	% of Anglers Participating	% of Age Range	Number of Anglers Participating	% of Anglers Participating	% of Age Range
16 to 19	480	2.7	6.7	0	0.0	—
20 to 24	640	3.6	4.7	341	8.0	2.5
25 to 34	3573	20.1	6.6	560	13.2	1.0
35 to 44	6826	38.6	9.4	1771	41.6	2.4
45 to 54	3768	21.2	8.9	750	17.6	1.7
55 to 64	2240	12.6	8.4	724	17.0	2.7
65 and over*	124	0.7	11.6	112	2.6	10.5
unknown	124	0.7	5.7	0	0.0	0.0
Totals	17 775	100.0	8.2	4258	100.0	2.2

* Alberta residents age 65 and over are not required to purchase a sportfishing licence and therefore are not accurately accounted for in this survey.

4.6.2 Tournaments

About 2.2% of the anglers said they had participated in a tournament in Alberta during 1995, which represented 4258 anglers (Table 16). The 35-44 age group made up 41.6% of the anglers who participated at tournaments, but only 2.4% of all Alberta anglers in that age range were involved in a tournament. The majority of Alberta anglers supported tournaments, in that only 19.3% said tournaments should not be allowed; however, 96.4% felt tournaments should be regulated (Table 18). A mandatory permit system administered by Alberta Environment had the strongest support and was favoured by 46.3% of the respondents. Over 50% of the anglers responded positively in each category to allow sportfishing clubs and charitable organizations to hold tournaments, and gave 38 - 48% support for local communities and social groups (Table 18). More than 75% were opposed to the categories to allow just anyone, or to allow commercial promoters to hold derbies.

TABLE 17. ANGLER OPINION ON HOW DERBIES AND TOURNAMENTS SHOULD BE REGULATED IN ALBERTA.

Response Categories	Percentage of Responses
<u>Derbies:</u>	
Do Not Allow	15.6
Mandatory Permit System by Alberta Environmental Protection	38.9
Self-Regulation	24.2
Registration with an Independent Sanctioning Body	15.3
No Regulation	6.1
<u>Tournaments:</u>	
Do Not Allow	19.3
Mandatory Permit System by Alberta Environmental Protection	46.3
Self-Regulation	14.5
Registration with an Independent Sanctioning Body	16.3
No Regulation	3.6

TABLE 18. ANGLER OPINION ON WHOM SHOULD BE ALLOWED TO HOLD/ORGANIZE DERBIES AND TOURNAMENTS IN ALBERTA.

Response Categories	Percentage of Responses (Yes)
<u>Derbies:</u>	
Anyone	27.6
Sportfishing Organizations (fishing clubs)	79.1
Non-profit, Charitable Organizations	69.5
Social Groups (church, work, clubs)	55.7
Chambers of Commerce/Local Communities	56.5
Commercial Promoters	20.4
<u>Tournaments:</u>	
Anyone	19.1
Sportfishing Organizations (fishing clubs)	75.2
Non-profit, Charitable Organizations	58.5
Social Groups (church, work, clubs)	38.8
Chambers of Commerce/Local Communities	48.1
Commercial Promoters	22.9

5.0 EXPENDITURES AND INVESTMENTS

5.1 Direct Expenditures

over \$7.6 million, or \$604 per active angler. Food, lodging and transportation accounted for 82% of the expenditures of resident anglers and 64% of the expenditures of non-resident anglers.

In 1995, anglers spent \$3.2 million on fishing packages in Alberta (Table 20). These packages included costs such as aircraft, lodge facilities, charter boats and guides. In 1995, 1.4% of resident anglers (3077), 5.1% of non-resident Canadian anglers (322), and 20.1% of non-resident non-Canadian anglers (1274) purchased fishing packages. Fishing packages accounted for 1.3% of all resident expenditures, 7.6% of all non-resident Canadian expenditures and 29.7% of all non-resident non-Canadian expenditures. Resident anglers purchased 65.8% of the fishing packages and expended 47.9% of money spend on fishing packages.

5.2 Major Investments

In 1995, anglers invested \$445.1 million on durables and property, of which \$186.2 million (42%) was attributed to sport fishing in Alberta. Of this total, resident anglers invested \$439.5 million in Alberta (Table 21); of which about \$181.7 million (41%) was attributed to sport fishing. Non-resident anglers invested \$5.7 million in Alberta (Table 21), of which about \$4.5 million (80%) was attributed to sport fishing. The average investment attributed to sport fishing made by active resident anglers was \$827; and \$359 by active non-resident anglers.

Overall, direct expenditures and investments (in whole or in part) totaled \$570.4 million for goods and services in 1995, of which \$311.5 million, or 55%, was attributed to sport fishing in Alberta.

TABLE 19. EXPENDITURES DIRECTLY ATTRIBUTABLE TO SPORTFISHING IN ALBERTA IN 1995 (CAN \$)

Expenditure	Resident	Non-Resident		Total
		Canadian	Non-Canadian	
Food and Lodging (Food, Motels, Camping Fees)	41 923 833	1 218 681	1 823 036	44 965 550
Transportation (Travel Costs, Boating Expenses)	54 183 443	914 299	955 014	56 052 756
Fishing Services (Boat Rentals, Guides, Licence Fees)	5 472 027	213 002	478 289	6 163 318
Fishing Supplies (Bait, Tackle, Etc)	12 851 276	160 020	153 902	13 165 198
Fishing Packages Purchased*	1 532 194	208 840	1 456 811	3 197 845
Other	1 664 888	22 948	34 498	1 722 334
Total	117 627 661	2 737 790	4 901 550	125 267 001
Average Per Active Angler	535	433	773	538
Average Per Angler Day	32	48	172	34

* - Values Explained in Table 19.

TABLE 20. FISHING PACKAGES PURCHASED IN ALBERTA IN 1995 (CAN \$)

	Resident	Non-Resident		Total
		Canadian	Non-Canadian	
Numbers of Active Licensed Anglers Purchasing Package	3077	322	1274	4673
Percentage of Total Active Licensed Anglers Purchasing Package	65.8	6.9	27.3	100.0
Percentage of Active Licensed Anglers in Category Purchasing Package	1.4	5.6	20.1	2.0
Cost of Packages Purchased	\$1 532 194	\$208 840	\$1 456 811	\$3 197 845
Average Cost per Active Licensed Angler	\$498	\$649	\$1143	\$684
Total Active Licensed Anglers	219 807	6319	6339	232 465

TABLE 21. MAJOR PURCHASES OR INVESTMENTS ATTRIBUTED IN WHOLE OR IN PART TO SPORTFISHING IN ALBERTA IN 1995 (CAN \$)

Expenditure Category		Resident	Non-Resident		Total
			Canadian	Non-Canadian	
Fishing Equipment (Rods, Reels, Fish Finders, etc.)	Total amount of expenditure	14 072 361	338 348	63 204	14 473 913
	Portion attributed to sportfishing	14 072 361	338 348	63 204	14 473 913
Boating Equipment (Boats, Motors, Trailers, etc.)	Total amount of expenditure	71 843 045	302 566	0	72 145 611
	Portion attributed to sportfishing	50 327 681	21 377	0	50 539 058
Camping Equipment (Tents, Trailers, etc.)	Total amount of expenditure	89 747 739	668 004	3 707	90 419 450
	Portion attributed to sportfishing	38 380 354	127 723	713	38 508 791
Special Vehicles (4x4's, Campers, ATVs, etc.)	Total amount of expenditure	189 994 796	469 394	0	190 464 190
	Portion attributed to sportfishing	53 452 860	168 517	0	53 621 378
Land - Buildings (Cabins, Cottages, Land, etc.)	Total amount of expenditure	65 790 635	3 465 821	0	69 256 457
	Portion attributed to sportfishing	18 575 022	3 433 348	0	22 008 371
Other (Special Clothing, Waders, etc.)	Total amount of expenditure	8 076 222	279 096	73 079	8 428 396
	Portion attributed to sportfishing	6 932 094	130 288	67 046	7 129 429
Combined Categories	Total amount of expenditure	439 524 798	5 523 229	139 990	445 188 017
	Portion attributed to sportfishing	181 740 375	4 409 603	130 964	186 280 942

5.3 Willingness to Pay

Active anglers were asked "what is the maximum additional amount you would have paid per day before deciding it was too expensive to fish the same number of days in Alberta in 1995?" Choices given and results obtained are shown in Table 22. Seventy-six per cent of anglers who fished in Alberta in 1995 expressed their willingness to pay more if their daily fishing cost had been higher due to increased costs for gasoline, accommodation, supplies or other services. Of these anglers, 37% would have stopped fishing, or reduced their time fishing, when their additional costs per day reached \$10. Sixty-one percent of the anglers would have adjusted their fishing activities before, or when they reached a maximum additional cost of \$20; 74% by \$30; 80% by \$40; 92% by \$50; and 98% by \$100. Less than 2% of the anglers indicated a willingness to pay more than \$100 in additional costs per day. When extrapolating the results on an active angler basis to all active anglers, the total additional amount anglers indicated they were willing to pay to go fishing in Alberta in 1995 was approximately \$81million.

TABLE 22. ADDITIONAL COSTS ANGLERS INDICATED THEY WERE WILLING TO PAY PER DAY FOR FISHING IN ALBERTA IN 1995 (CAN \$)

ADDITIONAL COSTS PER DAY	Resident		Non-Resident				Total	
	%	%*	Canadian		Non-Canadian		%	%*
			%	%*	%	%*		
Less than \$10.00	13.3	13.3	12.3	12.3	5.8	5.8	13.1	13.1
\$10.00	24.5	37.8	19.4	31.7	16.0	21.8	24.1	37.2
\$20.00	24.2	62.0	20.9	52.6	24.9	46.7	24.2	61.4
\$30.00	12.4	74.4	14.2	66.8	12.8	59.5	12.5	73.9
\$40.00	6.0	80.4	7.7	74.5	2.5	62.0	6.0	79.9
\$50.00	12.1	92.5	15.3	89.9	23.0	85.0	12.4	92.3
\$60.00	1.3	93.8	0.0	89.9	2.4	87.4	1.3	93.6
\$70.00	0.6	94.4	1.0	90.9	0.0	87.4	0.6	94.2
\$80.00	1.5	95.9	0.8	91.6	1.4	88.8	1.5	95.7
\$90.00	0.1	96.0	0.0	91.6	0.0	88.8	0.1	95.8
\$100.00	2.3	98.3	4.7	96.3	5.7	94.5	2.5	98.3
More than \$100.00	1.5	99.8	3.8	100.1	5.6	100.1	1.6	99.9
Total annual willingness to pay	\$79 266 475		\$1 336 420		\$682 846		\$81 285 741	
Average per angler-day	\$361		\$211		\$111		\$350	

* - Cumulative percentages

6.0 FISHING EFFORT

Angling in Alberta is a major recreational activity. Anglers fished a total of about 3.7 million days in 1995 (Table 23). On the average, each angler spent 15.9 days fishing. Resident anglers fished an average of 16.5 days and non-residents spent an average of 6.8 days at their sport. Resident anglers expended 98% of the total fishing effort in 1995. Eighty-four per cent of all fishing effort occurred during the open-water season (Table 23). Resident anglers accounted for 98.7% of all fishing through ice. Alberta was divided into eight statistical areas representing the Province's eight Fish Management Areas (FMAs). Although anglers showed some favour toward FMA 7 (Northeast) and FMA 5 (Central), fishing pressure in 1995 was well distributed throughout the province (Table 24).

TABLE 23. FISHING EFFORT (ANGLER-DAYS) BY SEASON IN ALBERTA IN 1995.

Season	Resident	Non-Resident		Total
		Canadian	Non-Canadian	
Fishing streams (rivers, creeks and canals)	1 160 448	17 744	11 831	1 190 024
Average per active licensed angler	5.3	2.8	1.9	5.1
Fishing at lakes in open water	1 890 519	32 576	15 790	1 938 884
Average per active licensed angler	8.6	5.2	2.5	8.3
Fishing lakes through ice	578 152	6 854	830	585 836
Average per active licensed angler	2.6	1.1	0.1	2.5
Total days fishing	3 629 119	57 174	28 451	3 714 744
Average per active angler	16.5	9.0	4.5	15.9
Licensed active anglers	219 807	6319	6339	232 465

TABLE 24. GEOGRAPHICAL DISTRIBUTION OF SPORTFISHING EFFORT IN ALBERTA IN 1995.

Statistical Area	Resident		Non-Resident				Totals	
	Man-days	%	Canadian Man-days	%	Non-Canadian Man-days	%	Man-days	%
FMA 1 Southern	359 134	9.9	12 528	21.9	1 092	3.8	372 754	10.0
FMA 2 Crowsnest	267 605	7.4	4 415	7.7	4 537	15.9	276 556	7.4
FMA 3 East Slopes	465 469	12.8	5 283	9.2	3 615	12.7	474 367	12.8
FMA 4 Hinton	325 800	9.0	4 085	7.1	1 538	5.4	331 423	8.9
FMA 5 Central	714 760	19.7	9 040	15.8	2 867	10.1	726 667	19.6
FMA 6 Peace River	416 779	11.5	5 842	10.2	3 056	10.7	425 677	11.5
FMA 7 Northeast	967 041	26.6	12 599	22.0	6 960	24.5	986 600	26.6
FMA 8 Ft. McMurray	113 318	3.1	3 383	5.9	4 785	16.8	121 486	3.3
Total	3 629 119	100.0	57 174	99.8	28 451	99.9	3 714 744	100.1

7.0 FISH HARVEST

In 1995, anglers caught an estimated 15.2 million fish of all species and retained 4.5 million of them. Fish kept by resident anglers accounted for 98% of the fish harvest in 1995. In 1995, 77.6% of the anglers fishing in Alberta indicated they had practiced catch-and-release fishing (Table 25). Voluntary release of fish was practiced at least on occasion by 97% of resident anglers, by 98% of non-resident Canadian anglers and by 96% of non-Canadian anglers.

TABLE 25. CATCH-AND-RELEASE ACTIVITIES OF LICENSED ANGLERS IN ALBERTA IN 1995.

	Resident %	Non-Resident		Total %
		Canadian %	Non-Canadian %	
Practiced	77.9	64.7	79.2	77.6
Reasons Practiced				
mandatory	2.7	2.1	4.2	2.7
voluntary	68.9	72.9	83.0	69.4
both	28.4	25.1	12.8	27.9

Perch, northern pike, rainbow trout and walleye were the most widely taken species, accounting for 78% of the catch and 82% of the harvest (Table 26). In all, 70% of the fish caught were released by anglers practicing voluntary catch-and-release or by anglers complying with regulations.

TABLE 26. HARVEST OF EACH FISH SPECIES BY ANGLERS IN ALBERTA IN 1995.

Fish Species	Resident		Non-Resident		Total Fish Caught	% of total catch	Total Fish Harvest	% of total harvest	Per cent of fish Released
	Caught	Kept	Caught	Kept					
Yellow perch	3 343 735	1 521 615	69 319	16 338	3 413 054	22.4	1 537 953	33.8	54.9
Northern Pike	3 129 106	868 330	203 622	23 858	3 332 728	21.9	892 188	19.6	73.2
Rainbow Trout	2 618 424	743 801	88 075	13 827	2 706 499	17.8	757 628	16.7	72.0
Walleye ³	2 397 605	507 840	67 520	13 126	2 465 125	16.2	520 966	11.4	78.9
Cutthroat Trout	649 821	52 120	7 055	803	656 876	4.3	52 923	1.2	91.9
Mountain Whitefish	533 302	215 060	4 178	712	537 480	3.5	215 772	4.7	59.9
Lake Whitefish ⁴	415 400	312 619	4 146	2 213	419 546	2.8	314 832	6.9	25.0
Brook Trout	371 434	80 643	6 988	1074	378 422	2.5	81 717	1.8	78.4
Goldeye ⁵	313 701	12 776	63 075	83	376 776	2.5	12 859	0.3	96.6
Brown Trout	302 165	43 314	10 361	758	312 526	2.0	44 072	1.0	85.9
Arctic Grayling	217 562	20 549	3 457	740	221 019	1.4	21 289	0.5	90.4
Burbot	148 281	49 391	695	336	148 976	1.0	49 727	1.1	66.6
Bull Trout	123 225	7 372	1 653	202	124 878	0.8	7 574	0.2	93.9
Lake Trout	59 860	23 686	10 693	1 792	70 553	0.5	25 478	0.6	63.9
Lake Sturgeon	3 575	901	271	0	3 846	0.02	901	0.02	76.6
Golden Trout	1 560	0	0	0	1 560	0.01	0	0.0	100.0
Other Game Fish ⁶	14 032	1 814	38	0	14 070	0.09	1 814	0.04	87.1
Other Fish ⁷	51 021	10 199	12 043	374	63 064	0.4	10 573	0.2	83.2
Total	14 693 809	4 472 030	553 189	76 235	15 246 998	100.1	4 548 265	100.1	70.2

³ - May include a low number of sauger.

⁴ - May include a low number of cisco (tullibee).

⁵ - May include a low number of mooneye.

⁶ - Other Game Fish would primarily consist of fish not identifiable to anglers because of the angler's inexperience with fish identification, and may also include low numbers of sauger, mooneye and cisco.

⁷ - Other Fish would primarily consist of suckers, however, some anglers may have included unidentified fish.

The distribution of fish harvest by Fish Management Area for each fish species is given in Table 27. In percentage of provincial harvest for each species, 69% of the perch, 50% of the northern pike and 42% of the walleye were taken from FMA 7 (Northeast). FMA 7 produced 33% of the total fish of all species caught and 43% of the total of all fish kept in the province. The harvest of rainbow trout was distributed throughout the province, which reflects the success of the stocking program.

TABLE 27. DISTRIBUTION OF HARVEST IN 1995 BY FISH MANAGEMENT AREA FOR EACH SPECIES OF FISH.

Fish Species	Number of Fish Harvest	Fish Management Area (FMA)							
		1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %
Yellow perch	1 537 953	3.8	<0.1	1.9	5.1	7.9	8.9	68.8	4.1
Northern Pike	892 188	13.3	1.0	1.2	7.8	7.8	15.9	49.5	3.5
Rainbow Trout	757 628	13.1	17.0	13.8	21.0	14.5	6.4	11.7	2.9
Walleye	520 966	3.8	0.4	1.6	6.2	3.7	34.0	42.0	8.5
Cutthroat Trout	52 923	1.9	42.3	49.9	2.5	1.8	1.0	0.6	0.0
Mountain Whitefish	215 772	0.9	3.3	19.4	17.8	56.7	1.1	0.8	0.0
Lake Whitefish	314 832	3.6	0.0	3.0	9.0	39.5	1.7	43.1	0.1
Brook Trout	81 717	6.9	7.7	42.4	17.5	7.9	16.9	0.5	0.0
Goldeye	12 859	45.2	0.0	0.0	0.0	17.6	14.8	22.1	0.0
Brown Trout	44 072	6.1	9.5	58.3	3.4	20.9	0.6	1.2	0.0
Arctic Grayling	21 289	0.0	0.0	0.0	61.1	0.0	33.5	1.1	4.3
Burbot	49 727	16.1	1.0	7.0	7.5	29.4	20.4	17.0	1.7
Bull Trout	7 574	0.0	11.1	52.9	10.2	25.7	0.0	0.0	0.0
Lake Trout	25 478	0.0	8.4	58.0	3.4	4.1	1.5	5.2	19.5
Lake Sturgeon	901	85.8	0.0	0.0	0.0	0.0	0.0	14.2	0.0
Golden Trout	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Game Fish*	1 814	13.6	0.0	0.0	27.6	29.4	0.0	29.4	0.0
Other Fish**	10 573	2.3	0.0	5.4	0.0	65.0	16.8	10.5	0.0
Total Fish Harvest	4 548 265	7.4	4.0	6.9	9.7	13.4	11.9	43.0	3.7
Total Fish Caught	15 246 998	6.7	6.5	10.9	8.0	14.3	12.9	33.3	7.4

The distribution of fish harvest by species for each Fish Management Area is given in Table 28. Although the harvest of various species of trout and mountain whitefish was common in FMA 2, FMA 3 and FMA 4, fish harvest from the majority of the province was dominated by perch, pike, walleye and lake whitefish. For example, ninety-five per cent of the fish harvest from FMA 7 consisted of perch (54%), northern pike (23%), walleye (11%) and lake whitefish (7%).

8.0 COMPARISONS of 1980, 1985, 1990 and 1995 RESULTS

Sportfishing licence sales, which had been increasing prior to 1985, decreased by 27% between 1985 and 1990, and leveled off between 1990 and 1995 (Table 29). The total days fished decreased by 38% between 1985 and 1990, and rose slightly between 1990 and 1995. The changes reflect the reduction in the number of anglers, but also the decline in the average number of days fished per angler from 17.6 days in 1985 to 14.6 days in 1990, and the slight increase to 15.9 days per angler in 1995.

Major influences in the decline in resident licence sales and fishing effort between 1985 and 1990 are as follows.

- 1) A three-fold increase in licence cost (from \$5 to \$15),
- 2) A near doubling in the average cost of a days fishing (from \$24 to \$40),
- 3) Regulation changes that increased spring closures, reduced catch limits and established size limits, and
- 4) The loss of trout for the stocking program because of a fish disease in the hatchery system (Infectious Pancreatic Necrosis [IPN]).

Between 1990 and 1995, costs remained relatively constant and the stocking program returned to full production.

TABLE 28. DISTRIBUTION OF FISH HARVEST BY SPECIES FOR EACH FISH MANAGEMENT AREA IN ALBERTA IN 1995.

Statistical Area	Number of Fish Kept	Fish Species*																	other game fish %	other fish %	total %
		YL PR %	NR PK %	RN TR %	WA LL %	CT TR %	MN WH %	LK WH %	BK TR %	GO LD %	BN TR %	AR GR %	BU RB %	BL TR %	LK TR %	LK ST %	GL TR %				
FMA 1 Southern	334 463	17.5	35.6	29.7	5.9	0.3	0.6	3.4	1.7	1.7	0.8	0.0	2.4	0.0	0.0	0.2	0.0	<0.1	<0.1	99.9	
FMA 2 Crownsnest	183 765	0.2	4.9	70.3	1.0	12.2	3.9	0.0	3.4	0.0	2.3	0.0	0.3	0.5	1.2	0.0	0.0	0.0	0.0	100.2	
FMA 3 East Slopes	314 287	9.5	3.5	33.3	2.6	8.4	13.3	3.0	11.0	0.0	8.2	0.0	1.1	1.3	4.7	0.0	0.0	0.0	0.2	100.1	
FMA 4 Hinton	441 967	17.6	15.8	36.1	7.3	0.3	8.7	6.4	3.2	0.0	0.3	2.9	0.8	0.2	0.2	0.0	0.0	0.1	0.0	99.9	
FMA 5 Central	609 131	19.9	11.4	17.9	3.1	0.2	20.1	20.4	1.1	0.4	1.5	0.0	2.4	0.3	0.2	0.0	0.0	<0.1	1.1	100.1	
FMA 6 Peace River	542 529	24.3	26.1	8.9	32.6	<0.1	0.4	1.0	2.6	0.4	<0.1	1.3	1.9	0.0	0.1	0.0	0.0	0.0	0.3	100.0	
FMA 7 North East	1 953 741	54.0	22.6	4.4	11.2	<0.1	<0.1	6.9	<0.1	0.1	<0.1	<0.1	0.4	0.0	<0.1	<0.1	0.0	<0.1	<0.1	100.1	
FMA 8 Ft. McMurray	168 062	37.9	18.5	13.2	26.2	0.0	0.0	0.2	0.0	0.0	0.0	0.5	0.5	0.0	3.0	0.0	0.0	0.0	0.0	100.1	

* - YLPR (yellow perch); NRPK (northern pike); RNTR (rainbow trout); WALL (walleye); CTTR (cutthroat trout); MNWH (mountain whitefish); LKWH (lake whitefish); BKTR (brook trout); GOLD (goldeye); BNTR (brown trout); ARGR (Arctic grayling); BURB (burbot); BLTR (bull trout); LKTR (lake trout); LKST (lake sturgeon); GLTR (golden trout)

The total harvest of all species combined decreased from 11.2 million in 1985 to 5.1 million in 1990 to 4.5 million in 1995. However, total catch decreased from 19.6 million in 1985 to 13.7 million in 1990, and increased to 15.3 million in 1995. Regulated and voluntary catch-and-release fishing contributed to the reduced fish harvest, possibly as much as did the reduced fishing effort and spring closures. Catch-and-release fishing increased from 43% to 63% between 1985 and 1995, and from 63% to 70% between 1990 and 1995.

Expenditures and investments attributed to sportfishing nearly doubled between 1980 and 1985, but only showed a slight increase in 1990 and a small decline in 1995. The total amount attributable to sport fishing changed from \$154.5 million in 1980, to \$294.6 million in 1985, to \$320.9 million in 1990 and \$311.6 million in 1995.

9.0 CONCLUSIONS

The results of the 1995 survey of sport fishing in Alberta confirm that it is a significant form of outdoor recreation and a major user of the fish resources of the province. Three measures of that significance are contained in the results of the survey. First, anglers spent \$125.3 million on activities directly associated with sport fishing. Secondly, anglers invested \$445.2 million on major durables and property, of which \$186.3 million was used for sport fishing. In all, anglers invested a total of \$570.6 million in 1995, of which \$311.6 million was directly attributed to sport fishing.

The third measure concerns fishing effort and harvests. Overall, 246 113 adult anglers purchased an Alberta sportfishing licence in 1995, and of these, 232 465 actively participated in the sport. Most (219 807) of the active anglers were residents of the province. Anglers fished a total of 3.7 million days in 1995 and harvested 4.5 million fish of all species. The average angler fished approximately 16 days, kept about 20 fish and spent roughly \$1,340. The number of fish kept decreased primarily as a result of an increase in catch-and-release fishing.

Anglers indicated they were more concerned about the fishing experience than catching fish. Lack of pollutants in fish and water quality were rated as the two most important factors while size and catch rate of fish were rated six and fifteen, respectively. Although fish provided the focus for angling activity, other elements such as relaxation and enjoyment of nature contributed to a greater recreational experience.

Approximately 8% of resident anglers had participated in a derby in Alberta during 1995. The majority of Alberta anglers supported derbies, in that only 15.6% said derbies should not be allowed; however, 93.9% felt derbies should be regulated. About 2% of anglers had participated in a tournament in Alberta during 1995. The majority of Alberta anglers supported tournaments, in that only 19.3% said tournaments should not be allowed; however, 96.4% felt tournaments should be regulated.

Approximately 48% of the anglers indicated that they had fished at a trout stocked lake, pond or reservoir in 1995. These anglers spent 869 581 days fishing at trout stocked sites. The harvest of rainbow trout was distributed throughout the province, which reflects the success of the stocking program. Alberta's trout stocking program was rated as important to very important by 81% of the licensed resident anglers. When asked to rate their fishing success at trout stocked sites in 1995, 53% rated their success as good to excellent and 47% said poor to fair.

Overall, recreational fishing was rated as good to excellent by 63% of the resident anglers. The majority of resident anglers (69%) were satisfied with the quality of their recreational fishing experience.

TABLE 29. COMPARISON OF ANGLER CHARACTERISTICS, DAYS FISHED, SPECIES HARVEST AND EXPENDITURES ATTRIBUTED TO SPORTFISHING IN ALBERTA FOR THE YEARS 1980, 1985, 1990 AND 1995.

SPORTFISHING IN ALBERTA FOR THE YEARS 1980, 1985, 1990 AND 1995													
	Residents				Non-Residents				Totals				
	1980	1985	1990	1995	1980	1985	1990	1995	1980	1985	1990	1995	
Total Licensed Anglers	295 771	331 152	240 728	232 967	12 673	12 158	9 248	13 166	308 444	343 310	249 976	246 113	
Total Active Adult Anglers*	252 059	294 465	220 283	219 807	11 412	11 284	8 752	12 658	263 471	305 749	229 035	232 465	
Total Days Fished (millions)	4.45	5.31	3.29	3.63	0.06	0.06	0.05	0.08	4.51	5.37	3.34	3.71	
Average Days Fished per Angler	17.7	18.0	14.9	16.5	5.3	5.4	6.2	6.8	17.1	17.6	14.6	15.9	
Total Fish Caught (millions)	n/a	19.22	13.37	14.69	n/a	0.33	0.28	0.55	n/a	19.55	13.65	15.25	
Total Fish Kept (millions)	10.44	11.13	5.06	4.47	0.13	0.09	0.06	0.08	10.57	11.21	5.12	4.55	
Average Fish Kept per Angler	41	38	23	20	12	8	9	6	40	37	22	20	
Direct Expenditures (millions CDN\$)	60.42	127.02	130.14	117.63	2.15	5.47	4.01	7.64	62.57	132.49	134.15	125.27	
Major Purchases Attributable to Sportfishing (millions CDN\$)	91.39	34.78	186.00	181.74	0.56	0.36	0.78	4.54	91.96	162.16	186.78	186.28	
Total Spent Sportfishing (millions CDN\$)	151.81	161.80	316.14	299.37	2.72	5.83	4.79	12.18	154.53	294.65	320.93	311.55	
Average Dollars Spent per Angler (CND\$)	602	549	1435	1362	238	32	547	962	587	530	1401	1340	